

Application Serial No. 09/882,409  
Reply to Office Action of July 18, 2008

PATENT  
Docket: CU-5986

**Amendments to the Claims**

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

**Listing of claims:**

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1. – 219. (Canceled)

220. (Currently Amended) ~~[[The]]~~ A structure for pattern formation adapted for optically forming a pattern, comprising:

a substrate; and

a photocatalyst-containing layer provided on the substrate, wherein the photocatalyst-containing layer contains silicone, in which groups containing a fluoroalkyl group are bonded to silicon atoms, and further wherein the wettability of the silicone is variable through photocatalytic action upon pattern-wise exposure according to claim 219, wherein groups containing a fluoroalkyl group are bonded to silicon atoms in the silicone.

221. (Currently Amended) The structure for pattern formation according to claim ~~[[219]]~~ 220, wherein the silicone has been prepared from a composition containing an organoalkoxysilane.

222. (Currently Amended) The structure for pattern formation according to claim ~~[[219]]~~ 220, wherein the silicone has been prepared from a composition containing a reactive silicone compound.

223. (Currently Amended) The structure for pattern formation according to claim ~~[[217]]~~ 220, wherein the structure for pattern formation is original plate for a printing plate.

224. (Currently Amended) A method for pattern formation adapted for optically forming a pattern, the method comprising the steps of:  
providing a structure for pattern formation, the structure comprising a photocatalyst-containing layer provided on the substrate, wherein the photocatalyst-

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containing layer contains silicone, in which groups containing a fluoroalkyl group are bonded to silicon atoms, and further wherein the wettability of the silicone is variable through photocatalytic action upon pattern-wise exposure ~~containing a material of which the wettability is variable through photocatalytic action,~~ and changing the wettability of the material by the action of the photocatalyst.

225. (Previously Presented) The method for pattern formation according to claim 224, wherein pattern-wise exposure of the photocatalyst-containing layer is carried out by light beam exposure.

226. (Previously Presented) The method for pattern formation according to claim 224, wherein pattern-wise exposure of the photocatalyst-containing layer is carried out by exposure through a photomask.

227. (Currently Amended) The method for pattern formation according to claim 224, wherein pattern-wise exposure of the photocatalyst-containing layer is carried out ~~exposure through a photomask~~ while heating the structure for pattern formation.

228. (Currently Amended) An element comprising:

a substrate;

a photocatalyst-containing layer provided on the substrate, wherein the photocatalyst-containing layer contains silicone, in which groups containing a fluoroalkyl group are bonded to silicon atoms, and further wherein the wettability of the silicone is variable through photocatalytic action upon pattern-wise exposure ~~containing a material of which the wettability is variable through photocatalytic action upon pattern-wise exposure;~~ and

a functional layer provided for pattern formation in [[its]] areas corresponding to a pattern obtained by the wettability of the material being changed by the action of the photocatalyst.

229. (Previously Presented) The element according to claim 228, wherein the functional layer is a layer containing at least a metal.

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230. (Cancelled)

231. (Currently Amended) A process for producing an element, comprising the steps of:

providing a structure for pattern formation, comprising:

a substrate;

a photocatalyst-containing layer provided on the substrate, wherein the photocatalyst-containing layer contains silicone, in which groups containing a fluoroalkyl group are bonded to silicon atoms, and further wherein the wettability of the silicone is variable through photocatalytic action upon pattern-wise exposure ~~containing a material of which the wettability is variable through photocatalytic action upon pattern-wise exposure~~; and

forming a functional layer provided on the structure for pattern formation in areas corresponding to a pattern, of the structure for pattern formation, obtained by the wettability of the material being changed by the action of the photocatalyst.

232. (Currently Amended) The process for producing an element according to claim 231, comprising the steps of:

coating of a composition for a functional layer onto the whole surface of the structure for pattern formation, and

forming a patterned functional layer on the structure for pattern formation only in its wettability-varied exposed areas by utilizing ~~[[the]]~~ repellency of unexposed areas.

233. (Currently Amended) The process for producing an element according to claim 231, comprising the steps of:

~~instillation of~~ installing a composition for a functional layer onto the whole surface of the structure for pattern formation, and

forming a patterned functional layer on the structure for pattern formation only in its wettability-varied exposed areas by utilizing ~~[[the]]~~ repellency of unexposed areas.

234. (Previously Presented) The process for producing an element according to claim 231, wherein the functional layer is formed on the structure for pattern

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formation by ejecting a composition for a functional layer through a nozzle to the wettability-varied areas.

235. (Currently Amended) The process for producing an element according to claim 234, wherein ~~[[the]]~~ an ink-jet system is used for the nozzle ejection.

236. (Currently Amended) The process of producing an element according to claim 231, comprising the steps of:

~~adhesion of~~ adhering a composition for a functional layer onto the whole surface of the structure for pattern formation, and

forming the functional layer by transferring the composition for a functional layer in pattern-wise only to the exposed wettability-varied area, due to a difference in adherence of exposed area and unexposed area, on another substrate.

237. (Previously Presented) The process for producing an element according to claim 231, wherein the functional layer is formed on the structure for pattern formation by thermal or pressure transfer from a film coated with a composition for a functional layer or a roll coated with a composition for a functional layer.

238. (Previously Presented) The process for producing an element according to claim 231, wherein the functional layer is formed on the structure for pattern formation by film formation utilizing electroless plating.

239. (Previously Presented) The process for producing an element according to claim 231, comprising the steps of:

laminating a composition for a functional layer onto the whole surface of the structure for pattern formation, and

removing the functional layer in its unexposed areas to form a patterned functional layer.

240. (Previously Presented) The process for producing an element according to claim 239, wherein the functional layer is formed on the structure for pattern formation by film formation of a composition for a functional layer.

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241. (Currently Amended) The process for producing an element according to claim 239, wherein the functional layer is formed on the structure for pattern formation by film formation of a composition for a functional layer, utilizing vacuum transferring a composition for a functional layer.

242. (Previously Presented) The process for producing an element according to claim 239, wherein the functional layer is formed on the structure for pattern formation by transferring a composition for a functional layer.

243. (Previously Presented) The process for producing an element according to claim 239, wherein the functional layer is formed on the structure for pattern formation by ejecting a composition for a functional layer through a nozzle.

244. (Previously Presented) The process for producing an element according to claim 243, wherein the ejecting through a nozzle is done by ink-jet system.

245. (Previously Presented) The process for producing an element according to claim 239, wherein the unexposed area of the functional layer is removed by a solvent.

246. (Previously Presented) The process for producing an element according to claim 239, wherein the unexposed area of the functional layer is removed by adhering and peeling off a substrate which adhesive layer is formed.